FACT SHEET

as required by LAC 33:IX.3109 for major LPDES facilities, for draft Louisiana Pollutant Discharge Elimination System Permit No. <u>LA0036382</u>; AI 4856; <u>PER20080001</u> to discharge to waters of the State of Louisiana as per LAC 33:IX.2311.

The permitting authority for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality

Office of Environmental Services

P. O. Box 4313

Baton Rouge, Louisiana 70821-431

I. THE APPLICANT IS:

Lafayette Consolidated Government

East Wastewater Treatment Plant

P.O. Box 4017 C

Lafayette, JAN 0502

II. PREPARED BY:

Afton J. Bessix

DATE PREPARED:

January 7, 2009

III. PERMIT ACTION:

Reissue LPDES permit LA0036382, AI 4856

LPDES application received: April 30, 2008

EPA has notiretained enforcement authority.

LPDES permit issued: September 30, 2003 IEPDES permit expired: September 29, 2008

IV.

FACILITY INFORMATION:

The application is for the discharge of treated sanitary wastewater from a publicly owned treatment, works serving the City of Lafayette.

The permit application indicates the receipt of industrial wastewater. The industrial dischargers include:

Name of Discharger Allied Waste Services

<u>Flow</u> 867.8 GPD

PHIRInc.

4,233.8 GPD

Prigino

C.

The facility is located at 144 Judy Street in Lafayette, Lafayette Parish.

D. The treatment facility consists of a mechanical screening and grit removal, followed by primary sedimentation, mechanically aerated oxidation ditches; thence secondary clarification. Sludge is anaerobically digested and then mechanically and chemically dewatered before final application to permitted sites. Disinfection is by chlorination.

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E. Outfall 001

Discharge Location:

Latitude 30° 12'54" North

Longitude 91° 59' 54" West

Description:

treated sanitary wastewater

Design Capacity:

4.0 MGD

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

V. RECEIVING WATERS

The discharge is into the Vermilion River in segment 060801 of the Vermilion - Teche Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The critical low flow (7Q10) of the Vermillon River is 255 ofs

The hardness value is 67.0 mg/l and the fifteenth percentile value for TSS is 21 mg/l.

The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in the table below.

Overall Degree of Support for Segment		pport of Each	Use				
Partial	Primary Contacta Recreation	Secondary Contacta Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	Full

The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in LAC 33:1X.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. <u>ENDANGERED SPECIES:</u>

The receiving waterbody, Subsegment 060801 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007, from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. It was

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determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit to the LDEQ contact person, listed below, and may request a public hearing to clarify issues involved in the permit decision. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

For additional information, contact:

Ms. Afton J. Bessixe
Permits Division
Department of Environmental Quality
Office of Environmental Services
R. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. <u>PROPOSED PERMIT LIMITS:</u>

Subsegment 060801 Vermilion River-Headwaters to Bayou Fusilier-Bourbeaux junction to New Flanders (Ambassadon Caffery) Bridge LA Hwy. 3073, is not listed on LDEQ's Final 2006 303(d) List as impaired However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, pathogen indicators, suspended solids/turbidity/siltations and carbonian, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon anytichanges to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060801:

1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen This TMDL was finalized January 19, 2001 and established a loading capacity equal to the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen. This TMDL estimated the necessary reduction in nonpoint source loadings to accelerate progress toward full support of the DO standard. Since the TMDL did not require reductions in point

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source loadings, no additional permit requirements are included. However, individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

FLOW RATE

PERMIT LIMITS

greater than 25,000 gpd

May - Dec.: 10 mg/l CBOD₅/5 mg/l NH₃-N/5 mg/l DO Jan.- April: 20 mg/l CBOD₅/10 mg/l NH₃-N/5 mg/l DO

25,000 gpd or less

secondary limits year round

Additionally, in regard to nutrients such as nitrogen and phosphorous, LDEQ has determined that organic enrichment/DO directly correlates with overall nutrient impact. Thus, when organic enrichment/DO is limited (as with the established GBODS NH3-N/ DO limits), LDEQ is also in effect limiting and controlling nutrient concentrations and impacts

Therefore, this discharge will be permitted accordingly, and the permit maintains previously established limitations reflecting the above limits.

TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermili As per the TMDL finalized May 3, 2001, "Point sources do not represent a significant source of TSS as defined in this TMDL. Point sources discharge primarily organic TSS, which does not contribute to habitat impairment presulting from sedimentation. Because the point sources are minor contributors and discharges of organic suspended solids from point sources are already addressed by LDEQ through there permitting of point sources to maintain water quality standards for DO, the wasteload allocations for point source contributions were set to zero."

FSS limits are being maintained as previously established in this permit according to the current state water quality standards

Vermilion River TMDL for Fecal Coliform

The Vermilion River AMDIS for Fecal Coliforn was finalized on April 5, 2001, addressing the apresence of pathogen indicators in the watershed. As per this TMDL, "... there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Colifornieffluent limitations will remain as previously established in this permit.

TMDL for the Pesticide Carbofuran in the Mermentau River and Vermilion-Teche River Basins The TMDL for the Resticide Carbofuran in the Mermentau River and Vermilion-Teche River Basins was finalized on March 21, 2002 and states that "the one point source discharger, FMC Corporation's Agricultural Products Group Plant (FMC)... is the only known point source in the Vermilion-Teche Basin." As a result, the TMDL establishes a WLA for FMC only. Since this TMDL does not consider the Lafayette East Plant to be a contributing source, no additional permit requirements are included.

Vermillion River TMDL for Sulfate

This TMDL was originally finalized on March 13, 2001 and established a specific WLA for the Lafayette East Plant. Due to a subsequent change in criterion, this TMDL was withdrawn on June 28, 2005. Therefore, no additional permit limitations are required.

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Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

	Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
	CBOD ₅ May – Dec. Jan. – April	334 667	10 mg/l 20 mg/l	15img/l 30 mg/l	Limits are set in accordance with the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen.
	TSS May – Dec. Jan. – April	500	15 mg/l 20 mg/l	23 mg/l 30 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent
<i>i</i>					case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology
	Ammonia- Nitrogen May – Dec.	167	5 mg/l	10 mg/l 20 mg/l	utilized at this facility. Limits are set in accordance with the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen.
	Dissolved Oxygen		5 mg/l	N/A	Limits are set in accordance with the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen.

^{**}This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

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Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. Limits are set in accordance with Vermilion River TMDL for Fecal Coliform.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C, the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:1X.1113.B.7

4) Total Residual Chlorine

If chlorination is used to achieve the limitations on Feeal Coliform Bacteria; the effluent shall contain NO MEASURABLE Total Residual Chlorine (TRC) after disinfection and prior to disposal. Given the current constraints pertaining to chlorine analytical methods. NO MEASURABLE will be defined as less than 0.1 mg/l of chlorine. The TRC shall be monitored 5/week by grab sample. Limit set through BPJ in accordance with the previous LPDES, permit.

Toxicity Characteristics

In accordance with EPA's Region 6 Post-Third Round Toxics Strategy, permits issued to treatment works treating domestics wastewater with a flow (design or expected) greater than or equal to 1 MGD shall require biomonitoring at some frequency for the life of the permit or where available data show reasonable potential to cause lethal and/or sub-lethal toxicity, the permit shall require a whole cffluent toxicity (WET) limit (Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, April 16, 2008, VERSION 6).

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC 33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testings performed in accordance with the LPDES Permit No. LA0036382, Biomonitoring Section for the organisms indicated below.

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X.

TOXICITY TESTS

FREQUENCY

Chronic static renewal 7-day survival & reproduction test using Ceriodaphnia dubia

once/quarter

Chronic static renewal 7-day survival & growth test using fathead minnow (<u>Pimephales promelas</u>)

once/quarter1

If there are no lethal or sub-lethal effects demonstrated after the first year of quarterly testing, the permittee may certify fulfillment of the WET testing requirements in writing to the permitting authority. If granted, the biomonitoring frequency for the test species may be reduced to find less than once per year for the less sensitive species (usually *Pimephales promelas*) and not less than twice per year for the more sensitive species (usually *Ceriodaphnia dubia*). Upon expiration of the permit, the biomonitoring frequency for both species shall revert to once per quarter until the permit is re-issued.

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional concentrations shall be 8%, 6%, 4%, 3%, and 2%. The low-flow effluent concentration (critical low-flow dilution) is defined as 6% effluent. The critical dilution is calculated in Appendix B-1 of this fact sheet. Please see the attached biomonitoring frequency recommendation and rationale for additional requirements. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in the Biomonitoring Section under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in the Biomonitoring Section of the permits.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocations of the permit is subject to the provisions of LAC 33:1X.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

PREVIOUS PERMITS:

LPDES Permit No. WP

Issued: November 1, 2003 Expired: October 31, 2008

Effluent Characteristic	Discharge Limit Monthly Avg.	weekly Avg.	Monitoring Req Measurement Frequency	uirements Sample Type
Flow CBOD ₅	Report	Report	Continuous	Recorder
May – December January – April TSS	10 mg/l 20 mg/l	15 mg/l 30 mg/l	2/week 2/week	6 Hr. Composite 6 Hr. Composite
May – December January – April Ammonia-Nitrogen	15 mg/l 20 mg/l	23 mg/l 30 mg/l	2/week 2/week	6 Hr. Composite 6 Hr. Composite
May - December January – April	5 mg/l 10 mg/ <u>l</u>	10 mg/l 20 mg/l	2/week 2/week	6 Hr. Composite 6 Hr. Composite

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Effluent Characteristic	Discharge Limita Monthly Avg.	tions Weekly Avg.	Monitoring Requ Measurement Frequency	<u>irements</u> <u>Sample</u> <u>Type</u>
Dissolved Oxygen Total Residual	5 mg/l minimum		2/week	Grab
Chlorine (TRC)			2/week	Grab
Fecal Coliform Colonies/100 ml		-	Ž/week	Comb
pH (Standard Units)			2/week	Grab
Whole Effluent Lethality				Olub .
<u>Ceriodapnia dubia</u>	Report	Report A	1/quarter	24-Hr Composite
<u>Pimephales promelas</u>	Report	Report	l'/quarter	24-Hr Composite

The permit contains biomonitoring

AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates that an inspec tion was performed on March 17, 2008 for this facility.

Inspector - LDEQ Findings and/or Violations

Mr. Danny Derousselle provided lab analysis data and DMRs at the time of the inspection.

The data on the lab analysis sheets was consistent with the DMRs.

All-paperwork including calibration logs were found to be in order. All needed treatment units were in service at the time of the inspection. Hydraulictoverloads do occur at the treatment plant due to I & I problems in the collection system, but permit excursions do not occur as a result.

A 300-gallon spill did occur at the plant on December 7, 2006 that was The area was cleaned up and the incident was recorded in the storm water log book.

A total of 5 collection system overflows occurred from January - October

Samples are being taken at appropriate times and at the specified location.

The flow is being continuously recorded as required by the permit and the flow calculation check revealed on error of -1.5%.

11. Facility personnel do conduct routine checks on the flow meter to assure continued compliance.

12. A visual observation of the outfall at the time of the inspection revealed a clear discharge with no foam or visible solids.

13. At the time of the inspection, the facility appeared to be in compliance with the LPDES Permit.

XI.

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B) Compliance and/or Administrative Orders

A review of the files indicates that there are no recent enforcement actions administered against this facility

C) DMR Review

A review of the discharge monitoring reports for the period beginning May 2006 through June 2008 has revealed the following violations:

		302 4.22	N	
Parameter (1975)	100 400 200 200 200 200 200 200 200 200 2	Period of *** Excursion	har the contribute of the contribute of the Andrea (Contribute of the Contribute of	Reported
pН	001	December 2006	6.0 SUJminimum	5.9 SU
pН	001	√ January 2008	6.0 SUminimum	5.9 SU

Additionaly, the Biomonitoring Toxicity Testing reports for May 2007 through July 2007 revealed a few issues. The first testion the Pimephales promelas had two cups of the 20% and 100% dilutions dropped and are est was necessary. The reported values were from consolidating the results together for the original test and the retest. The Ceriodaphnia dubia reports stated that a sub-lethal effect was noted though the report further stated: "Based on Risher's Exact Test, the survival NOEC of the Lafayette Utilities System East WWTP Outfall 001 effluent was 100%. Using the full data set, Steel's Many-One Rank Testindicated that reproduction in the 5, 9 and 20 % effluent concentrations was significantly less than the control; however, reproduction in the 3, 4, 13, 50 and 100, % effluent concentrations was not significantly less than the control. Because the 20150 and 100% concentrations were tested in addition to the required five lowest concentrations, only the data from the five lowest concentrations were evaluated for compliance purposes. Based on Steel's Many-one Rank Test the reproduction NOEC of the Lafayette Utilities System East WWTP Outfall 001 effluent was 4%.

During this cycle of testing, numerous problems were noted on all of Lafayette Utilities System plants, especially, invalid tests and abnormal toxicity dose responses. The contract laboratory's corrective action response was to retrain all of the personnel.

ADDITIONAL INFORMATION:

XII.

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

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In accordance with LAC 33:1X.2903., this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b) (2) Cc) and CD); 304(b) (2); and 307(a) (2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

- 1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- Controls any pollutant not limited in the permit; or
- 3. Require reassessment due to change in 303(d) status of waterbody; or
- 4. Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 4.0 MGD.

Effluent loadings are calculated using the following example:

BOD: 8.34 gal/lb x 4.0 MGD x 10 mg/l = 334 lbs/day

At present, the Monitoring Requirements, Sample Types, and Frequency of Sampling as shown in the permit are standard for facilities of flows between 5 and 10 MGD.

Effluent Characteristics			- 3
PIIIIPHI I haracterictice	F. (1)	O1	
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Elow

EBODs

Total Suspended Solids

Ammonia-Nitrogen

Dissolved Oxygen

Fecal Coliform Bacteria

Total Residual Chlorine

pH

Biomonitoring

Ceriodaphnia dubia (Method 1002.0)

Pimephales promelas (Method 1000.0)

Monitoring Requirements

î	<u>vivieasurement</u>	Sample
Ų	Frequency	Type
	Continuous	Recorder
	2/week	6 Hr. Composite
	2/week	6 Hr. Composite
	2/week	6 Hr. Composite
	2/week	Grab

1/quarter

1/quarter

24 Hr. Composite24 Hr. Composite

Pretreatment Requirements

Based uponiconsultation with LDEQ pretreatment personnel, the City of Lafayette's Pretreatment Program was approved on March 16, 1984, tracked under the Lafayette Consolidated Government – East WWTP LPDES Permit LA0036382. The program was modified on September 24, 1993 to incorporate TBLLs and March 22, 2004 to include major ordinance revisions and pretreatment procedures manual revisions. Because this facility has an approved pretreatment program, it is recommended that LDEQ Option 2A Pretreatment language continue to be included in LPDES Permit LA0036382.

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Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report each year for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period	Avan ph.	
Begins	Ends	Audit Report Completion Date
Effective Date of Permit	6122Months from Audit Period Beginning Date	3 Months from Audit Period

XIII <u>TENTATIVE DETERMINATION:</u>

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations // Diport Department of Environmental Quality, 2005.

Bouisiana Water Quality Management Pland Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code: Fitle 33 - Environmental Quality, Part IX - Water Quality

Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards", Louisiana Department of
Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program", Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

<u>LPDES Permit Application to Discharge Wastewater</u>, Lafayette Consolidated Government, East Wastewater Treatment Plant, April 30, 2008.